

(No Model.)

J. WAMICH.  
LOOM SHUTTLE.

No. 304,878.

Patented Sept. 9, 1884.

Fig. 1.

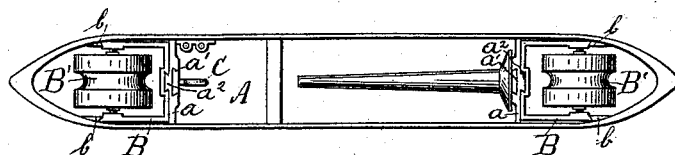


Fig. 2.

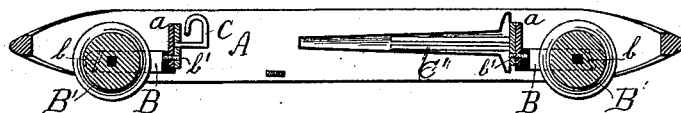
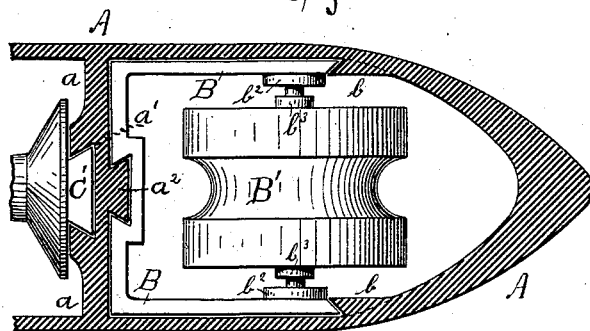


Fig. 3.



WITNESSES:

*For. H. Rosenbaum.*  
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INVENTOR

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BY *Gropelt & Raegenier*  
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# UNITED STATES PATENT OFFICE.

JOHANN WAMICH, OF AACHEN, PRUSSIA, ASSIGNOR OF ONE-HALF TO  
FRITZ KILLING, OF DELSTERN, GERMANY.

## LOOM-SHUTTLE.

SPECIFICATION forming part of Letters Patent No. 304,878, dated September 9, 1884.

Application filed August 9, 1883. (No model.) Patented in Germany February 11, 1881, No. 15,619.

*To all whom it may concern:*

Be it known that I, JOHANN WAMICH, a subject to the King of Prussia, residing at Aachen, Prussia, German Empire, have invented certain new and useful Improvements in Loom-Shuttles (for which I have obtained a patent in the German Empire, No. 15,619, dated February 11, 1881,) of which the following is a specification.

This invention has reference to shuttles for looms; and the invention consists of a cast-metal shuttle-shell having transverse bridges and abutments cast in one piece therewith, said bridges having dovetail seats for the roller-frames, bobbin-spindle, and thread-eye, which parts are further secured to the bridges by means of fastening-screws, as will more fully appear hereinafter, and finally be pointed out in the claims.

In the accompanying drawings, Figure 1 represents a bottom view of my improved loom-shuttle, and Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a longitudinal section of one end of the shuttle, with the roller and roller-frame in elevation, showing the connection of the roller-frame with the shuttle-shell on a larger scale.

Similar letters of reference indicate the corresponding parts.

In the drawings, A represents the shell of a loom-shuttle, which shell is made of malleable cast-iron, and provided with two transverse bridges, *a a*, that are cast integral therewith, each of the bridges having a dovetail groove, *a'*, on one side and a dovetail projection, *a''*, on the other side. The inner sides of the walls of the shell A are provided near the ends of the same with inclined abutments *b b*, which, in connection with the dovetail projections *a''* of the bridges *a a*, serve to retain U-shaped roller-frames B. The transverse piece or base of each roller-frame B fits by a dovetailed groove on the dovetail projection *a''* of the bridge, while its beveled ends are retained by the inclined abutments *b b*, as shown clearly in Fig. 3. The roller-frames B B are further secured in their position by clamp-screws *b'*, which pass through the bridges *a*, and take

into screw-holes in the roller-frames. At its outer ends each roller-frame B is provided with bearings *b''* for the shaft *b'''* of a roller, *B'*, which projects below the bottom edge of the shell A. In the dovetail groove *a'*, at the inner side of one of the bridges, a thread-eye, *c*, is inserted, and is secured therein by the same screw, *b'*, which holds the roller-frame B at that end of the shuttle. In the dovetail groove *a'* of the other bridge *a* the dovetailed base of the bobbin-spindle *c'* is inserted, the bobbin being placed in position on the spindle in the usual manner, said spindle being secured by the same screw, *b'*, that holds the adjacent roller-frame B.

Between the rollers and the ends of the shuttle-shell sufficient space is left in which the waste from the warp and weft threads can collect without exerting a brake action on the rollers.

The advantages of this invention are that the shuttle-shell is cast in one piece with the bridges and abutments, so that the roller-frames, the thread-eye, and the bobbin-spindle can readily be inserted and removed to be replaced by new ones when worn out.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A cast-metal shuttle, A, having transverse dovetailed bridges *a a* and abutments *b b*, all cast in one piece, substantially as described.

2. The combination, with a shuttle-shell, A, provided with abutments *b b* and with transverse bridges *a a*, having dovetail projections *a''*, of roller-frames B B, means for securing said frames in place, and rollers *B' B'*, substantially as described.

3. The combination of a shuttle-shell, A, having transverse bridges, said bridges having dovetail grooves at their inner sides, with the thread-eye *c*, bobbin-spindle, and fastening-screws *b'*, substantially as described.

4. The combination of a shuttle-shell, A, having transverse bridges and abutments, said bridges having dovetail projections at one side and dovetail grooves at the other, with roller-frames secured to the bridges and

abutments, rollers carried by said frames, a thread-eye and bobbin-spindle secured to the innersides of the bridges, and fastening-screws by which one roller-frame and the thread-eye  
5 and the other roller-frame and the bobbin-spindle are attached to the respective bridges, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOHANN WAMICH.

Witnesses:

JAMES T. DUBOIS,  
ELISE BRAUN.